

Cervical hibernoma

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ABSTRACT

Hibernomas, are rare, benign tumors composed of brown fat. They can affect multiple sites, including the head, neck, trunk, and extremities. Their clinical presentation is similar to that of malignant tumors such as liposarcomas, which can lead to mismanagement. Imaging is useful but histopathologic confirmation of the tumor is needed. We present two cases of histology-proven neck hibernoma treated with radical excision.

KEYWORDS Hibernoma; neck; surgery

Hibernomas, or brown fat benign tumors, are rare. Since brown fat enhances heterogeneously on imaging like a liposarcoma, histology is the cornerstone for diagnosis. The pathogenesis of hibernomas correlates with certain genetic rearrangements. We present two cases of giant cervical hibernoma treated surgically, without recurrence or malignant transformation.

CASE 1

A 58-year-old man had a mass for 18 years in the left cervical region (*Figure 1a*). Recently, pain and a sensation of heaviness developed in the area. The mass was less mobile and soft. No lymph nodes were palpable. Computed tomography (CT) revealed a 157 × 118 × 123 mm tumor, well circumscribed, heterogeneously enhancing, with areas of fat attenuation (*Figure 1b*). The patient underwent complete excision of the mass, and pathology examination revealed a hibernoma.

CASE 2

A 60-year-old man had a cervical mass for 3 years in the right lateral cervical region (*Figure 2a*) that had recently become painful. The mass in the right cervical triangle was above the collar bone, mobile and soft, with no palpable lymph nodes. CT revealed a 131 × 62 × 163 mm, well-circumscribed, heterogeneously enhanced mass with fat attenuation areas (*Figure 2b*). Following complete excision of the

mass, pathological examination confirmed a hibernoma (*Figure 2c*).

DISCUSSION

Hibernoma was first described in 1906 as a “pseudolipoma” by Merkel¹ and was termed “hibernoma” by Gery in 1914² because of the morphologic resemblance to the brown fat observed in hibernating animals. This tumor most often occurs in young people between the ages of 20 and 40 and affects men and women equally. There has been no correlation between tumor localization and embryological brown fat localization. More than 200 hibernoma cases have been reported in the breast, spinal cord, and larynx. Deep localization is possible. Most patients with neck hibernomas are asymptomatic, although slow tumor growth may compress adjacent structures at any time.³

Radiological examinations guide the hibernoma diagnosis and especially exclude liposarcomas.⁴ On ultrasound, hibernoma appears as an encapsulated, homogeneous, and richly vascularized mass. CT, magnetic resonance imaging (MRI), and angiography provide useful information; hibernomas are generally described as well-circumscribed tumors with variable homogeneity and with enhanced contrast. MRI can differentiate between lipoma and hibernoma because the latter is more vascularized, with large septa up to 2 mm, easily visible with a contrast agent. However, the diagnosis cannot be known with certainty until it is confirmed histologically.

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Figure 1. Case 1. (a) Large right cervical mass. (b) Cervical CT demonstrating a well-circumscribed, heterogeneously enhancing right laterocervical mass with areas of fat attenuation.



Figure 2. Case 2. (a) Large left cervical mass. (b) Cervical CT showing a left cervical inhomogeneous adipose tumor with visualization of the feeder vessel. (c) Operative view and specimen of the tumor removed en bloc.

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